



Monterey Bay National Marine Sanctuary

Sanctuary Office Report

Volume 8, Number 3



A REPORT FOR THE SANCTUARY ADVISORY COUNCIL MEMBERS

REPORTING PERIOD: APRIL 15, 2011 – JULY 29, 2011

ABOUT THE SANCTUARY

Designated in 1992, Monterey Bay National Marine Sanctuary (MBNMS or Sanctuary) is a federally protected marine area offshore of California's central coast. Stretching from Marin to Cambria, the MBNMS encompasses a shoreline of 276 miles and 6,094 square statute miles of ocean.

Supporting one of the world's most diverse marine ecosystems, it is home to numerous mammals, seabirds, fishes, invertebrates and plants in a remarkably productive coastal environment. MBNMS was established for the purpose of resource protection, research, education and public use of this national treasure.

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) AND OFFICE OF NATIONAL MARINE SANCTUARIES (ONMS) NEWS

Volunteer of the Year

Randy Rudd was honored as Volunteer of the Year by the National Marine Sanctuary Foundation at its annual Leadership Awards Dinner. Randy was nominated for his many hours of volunteer service, the enthusiasm and exuberance he brings and for his ability to serve as a sanctuary ambassador to the public at large. Randy began training as a Volunteer Scientific Diver for the site in 2008 and has already logged more dives in the sanctuary than some of the staff divers have accomplished in their tenure here; last year between June and December alone he logged 122 dives.

Ocean for Life

The Ocean for Life program brings together high school students of diverse backgrounds and cultures to discover marine science and conservation. A long-term evaluation was conducted with 2009 alumni and revealed exciting results: Following the Ocean for Life field study, 100% of student participants agree they have enhanced knowledge of ocean conservation and are advocates for ocean stewardship. As a result of the Ocean for Life program, 57% of student

participants have plans to pursue studies or a career in ocean or environmental studies, and 60% in cultural or international studies. Additionally, 97% of participants agree they have a better understanding that their local actions impact the ocean no matter where they live.

Ocean for Life promotes cross-cultural understanding between world cultures through the greater appreciation of the ocean and how it connects us all. NOAA's national marine sanctuaries provide the optimal setting for this unique opportunity to enhance cross-cultural relationships, while creating a stewardship ethic for the ocean and the universal human experience. The Ocean for Life program is a partnership between the NOAA Office of National Marine Sanctuaries, The GLOBE (Global Learning and Observations to Benefit the Environment) Program, Scubababes International and the National Marine Sanctuary Foundation in collaboration with National Geographic Society, American University's Center for Environmental Filmmaking and Meridian International Center. For a copy of the detailed evaluation report or more information about the Ocean for Life program, please contact Claire.fackler@noaa.gov

2nd Annual Cousteau Day

Sanctuaries staff celebrated the 2nd annual Cousteau Day at the Smithsonian Sant Ocean Hall, Saturday, June 11. Alexandra Cousteau, president of Blue Legacy International and granddaughter of legendary explorer Jacques Cousteau supported the event as well. She spoke with visitors about her grandfather's legacy, as well as the work she continues today to protect our ocean. Sanctuaries staff and other NOAA volunteers made red whale tail hats for visitors in honor of Cousteau's red watch cap. Nearly 1,000 hats were distributed during the 3-hour event. We also received more than 100 sign-ups for our Cousteau Day/Sanctuary Sam Facebook photo contest.

National Museum of the American Indian Visitors Participate in NOAA Staff-led Ocean Acidification Experiment

On July 23, staff from NOAA's Office of National Marine Sanctuaries and National Marine Fisheries Service demonstrated an ocean acidification experiment for attendees at the Living Earth Festival at the Smithsonian National Museum of the American Indian. The annual festival draws thousands of visitors and this year's theme was Conversations with the Earth: Indigenous Voices on Climate Change. Approximately 500 visitors took part in the experiment, where NOAA staff demonstrated a change in the acidity of water as CO₂ is dissolved in it. Using bromothymol blue as an indicator of the pH of the water, visitors participated by blowing through a straw into a test tube and causing the water to turn from blue to yellow as the CO₂ from their breath dissolved in the water and made it more acidic. The experiment was accompanied by scientific explanation and ocean conservation messages.

National Marine Sanctuary News

Channel Islands NMS

The Channel Islands Naturalist Corps volunteer program was named the Take Pride in America Outstanding Federal Volunteer Program during an award ceremony in Washington DC this July. Take Pride in America, a nationwide partnership program authorized by Congress to promote the appreciation and stewardship of our nation's public lands, hosts the event which honors excellence in volunteerism. The Channel Islands Naturalist Corps was recognized for its impact in the Channel Island region. Jointly coordinated by the Channel Islands National Marine Sanctuary and the Channel Islands National Park, the program engages over 140 volunteers who are specially trained to educate passengers on whale watch tours and island hikes. Volunteers also attend community events where they engage with over 300,000 people annually and take part in citizen science such as collecting marine mammal sighting data. For more information about the Take Pride in America Awards please visit <http://www.takepride.gov/aboutus.html>. To learn more about the Channel Islands Naturalist Corps volunteer program contact Shauna.Bingham@noaa.gov

Cordell Bank NMS

The digital archives staff at the California Academy of Sciences (CAS) is making good progress in cataloging and scanning the collection of over 3,000 underwater photographs of Cordell Bank that were donated to CAS by Cordell Expeditions in 2010. Each 35mm transparency is being cleaned and scanned following the standards of the California Digital Library. Good quality photos in which organisms can be identified will be publicly available on Calphotos (<http://calphotos.berkeley.edu>.) All photos will be indexed by date, location, photographer and species (if possible) in the CAS digital asset management system. Those interested in viewing sample photographs and learning more about this project can link to <http://www.calacademy.org/blogs/library/?p=1388>

Cordell Expeditions is a group of intrepid sport SCUBA divers, who made systematic surveys of Cordell Bank in the late 1970s and 1980s and petitioned NOAA to designate Cordell Bank a National Marine Sanctuary. Their collections have both scientific and historical significance to the Sanctuary since these collections provided the basis for the designation of Cordell Bank as a National Marine Sanctuary. The photos provide CBNMS with a retrospective window into the condition of Cordell Bank at the time of its designation and will be used for comparison with contemporary images taken at some of the same dive sites during a contemporary expedition in October of 2010.

Gulf of the Farallones NMS

On May 1, the Seabird Protection Network, working with regional airport managers and the Federal Aviation Administration (FAA) achieved an unprecedented 100% success in preventing seabird displacement at the 2011 Pacific Coast Dream Machine Air and Vehicle Show. The "fly-in" event draws pilots from around the country, and the 150 aircraft participating included vintage warbirds, 1940s and '50s classics and homebuilt experimental aircraft. Media outreach and direct pilot mailings provided advance notice of potential disturbance, and penalties for disturbance. Network staff participated in a pre-show briefing at which the FAA aviation safety inspector advised pilots and helicopter and biplane tour operators that the minimum altitude would be strictly enforced. Biologists stationed at Devil's Slide Rock, a nearby seabird breeding site, observed no major disturbances, as 36 planes flew near it at or above 1,000 feet. This event attracts up to 30% of the aircraft observed for the entire monitoring season (April-August).

Florida Keys NMS

Florida Keys National Marine Sanctuary has won a 2011 Department of Commerce Environmental Stewardship Award in the category of Energy and Water Management. The award recognizes several projects completed by the sanctuary in fiscal year 2010 ranging from the application of innovative technologies to the selection of alternative products for vessel maintenance. Completed projects include the installation of a photovoltaic solar panel roof over the Florida Keys Eco-Discovery Center to provide electricity for that building; electric hand dryers across the entire Nancy Foster Complex; automatic, motion-sensing, timed light switches in high-volume traffic areas to force timed shut-off of lights; and solar lights in key outdoor areas around the complex. Activities also included purchasing biosynthetic and biodegradable solvents, lubricants, pesticides, and cleaners for vessel and facility maintenance; replacing low-mileage vehicles with fuel-efficient, hybrid fuel vehicles; conducting vessel and vehicle audits and excessing unnecessary vessels and vehicles; conducting a water flow audit and addressing current and potential deficiencies; and replacing incandescent light bulbs with compact fluorescent bulbs.

Papahānaumokuākea Marine National Monument

Wildlife biologists at Midway Atoll National Wildlife Refuge, part of the co-managed Papahānaumokuākea Marine National Monument, have banded the first confirmed short-tailed albatross chick hatched outside of Japan. The five-month old chick received a permanent metal band on its right leg and a red-and-white one coded "AA00" on its left. When the bird fledges, the bands will help biologists track this extremely rare and endangered seabird to learn where it will one day go to nest. Most albatross return to the island where they were hatched. Read more: <http://www.flickr.com/photos/usfwspacific/sets/72157625522391142>.



MONTEREY BAY NATIONAL MARINE SANCTUARY NEWS AND PROGRAM UPDATES



MANAGEMENT

2011 Speaker's Cup VIP Field Trip aboard R/V FULMAR

On Sunday, April 17th, MBNMS and Oceana hosted a cruise aboard the R/V FULMAR for state assembly members - "2011 Speaker's Cup VIP Field Trip". This was an extension of an annual golf event at Pebble Beach for state legislative staff. The Honorable John A. Perez, Speaker of the Assembly (46th District) participated, along with another four assembly members from California districts that include Luis Alejo (28th District), Paul Fong (22nd District), Roger Hernandez (57th District), Ricardo Lara (50th District). Additional participants include staffers and guests from the assembly member's office's as well as local officials. The purpose of the cruise was to highlight the state of the art marine research happening in the Sanctuary.

MBNMS Hosts International Visitors

On June 9, the Monterey Bay National Marine Sanctuary hosted 25 international visitors from all parts of the world to provide them with an overview of the National Marine Sanctuary System and the Monterey Bay NMS in particular. Representing environmental leaders and professionals from 24 different countries, the group was visiting under the auspices of the International Visitor Leadership Program, the U.S. Department of State's premier professional exchange program. This program aims to build mutual understanding between the U.S. and other nations through short-term visits to the U.S. for current and emerging foreign leaders. The visitors came to the U.S. for three weeks to learn about various aspects of national and state parks, biodiversity, and ecotourism management.

June CPR, First Aid and AED trainings

On June 1 and 2, MBNMS and WCRO staff completed their annual trainings for CPR, First Aid and AED use. Dale Chastagner with SWFSC conducted the trainings for the sixth year in a row.

Draft MBNMS-Italian Memorandum of Agreement for Sister Sanctuary Partnership

MBNMS staff teleconferenced with the "Isole Egadi" Marine Protected Area team in Sicily to discuss potential Sister Sanctuary partnership ideas. The two sites share a number of common marine resource issues (ie. historical overfishing, introduced species) and the following ideas were discussed and will be included in the draft MOA: Building scientific cooperation and exchanging information about MPAs (ie. sharing Condition Reports); Training and capacity building for staff; and, Enhanced cultural enrichment opportunities between the fishing communities in Monterey and Isole Egadi as they share a rich, maritime history.

R/V FULMAR Management Team plan upcoming operations

The Fulmar Management Team consisting of Superintendents for MB, GF and CB, the West Coast Regional Director and the FULMAR Operations Team, allocated FY11 ops budget, scheduled days at sea, yard work, crewing updates, and planned upcoming operations. The FULMAR has approximately 100 DAS scheduled from early June to November, with about 60 days for internal projects including ACCESS cruises, deepwater characterization with camera sled and ROV, and lost fishing gear removal. The remaining 40 are scheduled for partner projects including AUV and multibeam work with NMFS and USGS, PISCO sub tidal monitoring, Caltrans landslide impact surveys and squid monitoring. Although the season started late (usually a March start) due to budget challenges, the schedule is shaping up for a busy five-month season.

MBNMS Participates in Big Sur Multi-Agency Advisory Council (MAAC)

MBNMS has had a seat on the Big Sur MAAC for a number of years, and attends quarterly meetings as one of the members. The Council includes a number of elected officials and members of the Big Sur community including Congressman Farr, Assembly member Monning, State Senator Blakeslee, Supervisor Potter, US Forest Service, Coastal Commission, State Parks, Caltrans, Monterey Co Planning Dept, Monterey Peninsula Regional Park District, BS Chamber of Commerce, and resident members. The July 15th meeting included presentations on The US Census Bureau (very interesting demographics on the Big Sur community) and the Rocky Creek Permanent Restoration Project from Caltrans. This is a project to fix the one-lane open only section of Hwy One with a single column viaduct project that will begin in March 2012 and take 16 months to complete. The Coastal Commission, Sanctuary office and others will be coordinating on the permit. We offered a sanctuary report with an update the Exploration Center, Lost Fishing Gear Removal project (at Pt Sur in Oct), and encouraged people driving south to stop by the Coastal Discovery Center Anniversary Fair in San Simeon. Attendance at the meeting is important for staying connected to the Big Sur community.

RESEARCH AND MONITORING

Smithsonian consults staff regarding intertidal exhibits at National Zoological Park

On April 7th, Sanctuary Integrated Monitoring Network (SIMoN) staff spoke with Cheryl Braunstein, Exhibit Developer at the Smithsonian's National Zoological Park. Since 2009, Dr. Steve Lonhart has served as a consultant on the development of an artificial tidepool and coastal exhibit that the Zoo is building. The detailed work has begun and Lonhart reviewed sketches from the designer showing the planned distribution of intertidal invertebrates along some rocks around the exhibit area. Lonhart was consulted to determine if the design was accurate. Because of visitor behavior and durability, the Smithsonian is very limited in what species they can represent, but tried to include several species characteristic of the west coast.

Annual MBNMS Currents Symposium a Huge Success

The theme of this year's Sanctuary Currents Symposium, held April 9 at CSUMB was "Ripple Effects: The Far-Reaching Impacts of Local Ocean Research." More than 300 people gathered at this annual event to listen to Monterey Bay area scientific experts inform the public about the ground-breaking research they are undertaking using tools such as ROVs, AUVs and satellite tags, and how their efforts are helping to shape ocean science and management policies nationally and internationally. Topics addressed ranged from great white sharks and Humboldt squid to California's forward-thinking ocean management strategies and a presentation by MBNMS Research Coordinator Dr. Andrew DeVogelaere on the Davidson Seamount. Dr. Michael Foster, Professor Emeritus at Moss Landing Marine Laboratories, was honored for his scientific achievements and gave the annual Ricketts Memorial Lecture on kelp forests. In addition, scientists, students and environmental organizations displayed 60 research posters and exhibits. The symposium was funded entirely by outside sponsors this year, mainly CSUMB, but also NOAA Fisheries, Monterey Bay Aquarium and Save the Earth.



Aerial view of Alder Creek landslide in Big Sur. MBNMS staff participated in intertidal surveys off the site of this landslide.

Photo Credit: Caltrans

Caltrans: Big Sur Landslide

In April there was a significant landslide at Alder Creek in Big Sur, which closed Highway One in both directions. This landslide received attention and interest from the community, local and federal elected officials, and the media. MBNMS staff have been working in collaboration with state and federal agencies to expedite regarding-opening of the road and proper disposal of landslide material. Toward that end, MBNMS staff conducted subtidal and intertidal surveys at the Alder Creek landslide site (a short video at: <http://www.youtube.com/watch?v=CS0Z5W7J2jY> depicts this). These surveys provided additional information that enabled MBNMS to quickly authorize the California Coastal Emergency Permit. It is expected that approximately 50,000 cys of the landslide material (i.e. 30%) will come to reside on the adjacent beach and enter the MBNMS as a result of wave action. Staff biologists found no evidence of black abalone and believe the habitat is too exposed, with a lack of fixed substrate and too much scour from cobble and gravel to provide suitable habitat for this endangered species. It was also determined that disposal strategies as outlined in the emergency permit should have short-term and negligible impact to MBNMS resources at the site. Additionally, these surveys will serve as a baseline for

subsequent monitoring studies that will be repeated at regular intervals over the next several years.

SIMoN staff reviews applicants for Nancy Foster Scholarship Program

Sanctuary Integrated Monitoring Network (SIMoN) staff agreed to serve as a National Oceanic and Atmospheric Administration (NOAA) Dr. Nancy Foster Scholarship Program (NFSP) panel member to evaluate grant applications submitted to NOAA for the Class of 2011. The NFSP provides support for independent graduate-level studies in oceanography, marine biology or maritime archaeology to students at an accredited university. Scholarship selections are based on academic excellence, letters of recommendations, research and career goals, and financial need.

Aquafind.com hosts information from SIMoN species database

Aquafind.com is a website that serves as a free resource for the Seafood, Aquaculture & Ornamental Fish Industries. Jim Hensinger contacted SIMoN staff and asked permission to create several data sheets using material from the Sanctuary Integrated Monitoring Network (SIMoN) web site (sanctuarysimon.org). Aquafind.com will copy the data into a page that they would place in their database

and could be called by Aquafind.com users when they search for a specific marine species. Aquafind.com has a typical search feature (<http://aquafind.com/producer/find.php>) that returns basic information on suppliers and, when available, the species itself. That's where the information from the SIMoN species database (<http://www.sanctuarysimon.org/species/>) provides content for Aquafind.com.

SIMoN staff participated in FULMAR safety training

On April 18, NOAA diving staff (Chad King, Steve Lonhart, Scott Kathey, and Dave Minard) participated in semi-annual safety training for divers. Tom Laidig, Unit Dive Supervisor for NOAA SWFSC, led the refresher aboard the R/V FULMAR. Other NOAA divers from PFEL also participated in a deep dive and in practicing procedures to hoist unconscious divers from the ocean onto the FULMAR using a litter and the A-frame. This session increased safe diving practices and emergency situation preparation.

Ongoing interest in seafloor impacts of a shipping container

In early March, MBNMS and MBARI partnered on a mission to assess the seafloor impacts of a container lost at sea in 2004. The media interest in this project has been steady since the cruise, including stories by the BBC and NPR. This week, the project was featured on Radio New Zealand National's ThisWayUp, and the interview is available at: http://static.radionz.net.nz/assets/audio_item/0008/2486591/twu-20110423-1310-Lost_shipping_containers-m048.asx A project and cruise summary was also presented to the MBNMS Advisory Council on April 21 and at The MBNMS Community Lecture Series in Cambria on April 22.

Davidson Seamount contributes to a report on the State of the Deep Coral Ecosystems of the United States

In 2007, a report summarizing the state of deep coral ecosystem of the United States was published (http://coris.noaa.gov/activities/deepcoral_rpt/). This report is being updated and MBNMS staff were asked to contribute insight on new information since 2007. We were able to provide information on the addition of Davidson Seamount to the ONMS as a protection, research and education measure for corals. Moreover, 17 new species have been described from Davidson Seamount along with a comprehensive taxonomic guide for the area. Finally, we provided six new scientific publications from the seamount; overall, indicating the significant contribution of this sanctuary management zone to NOAA's deep coral program. Davidson Seamount was also featured at the Sanctuary Currents Symposium earlier this month.

Study of the Monterey Bay hook and line fishery for California halibut planned

During the months of April and May, Sanctuary staff participated in proposed planning of a study of the hook and line fishery for California halibut in Monterey Bay. The hook and line study is a part of the Monterey Bay Halibut Research Design Project (HRDP), a group convened by California Assemblyman Bill Monning (D-27th District). The HRDP aims to gather information that will help guide management of the California halibut fishery by identifying the most economically and ecologically sustainable method of targeting the species in the state waters of Monterey Bay. The hook and line study would make use of certified observers on board vessels of fishermen with a history of successfully targeting halibut with hook and line gear. Central research questions include determining the extent of the hook and line fishery's profitability, determining the levels of hook and line effort that would be required to meet socioeconomic landings volume objectives, and measuring the fishery's levels of bycatch so that it can be compared to bycatch observed in the trawl fishery.

MBNMS Research Activity Panel Meets at Monterey Bay Aquarium Research Institute

On May 13th, the MBNMS Research Activity Panel (RAP) met at the Monterey Bay Aquarium Research Institute (MBARI) in Moss Landing, CA. Agenda items included: research and technology at MBARI; upcoming Monterey Bay Climate Change Adaptation Workshop; upcoming Unique and Rare Features Workshop of the MBNMS Ecosystem-based Management Initiative; Beach COMBERS program and funding need; RAP member recruitment; and recent Sanctuary Currents Symposium 2011. For information on the RAP, see <http://montereybay.noaa.gov/sac/rap/objectives.html>.

SIMoN staff provides REEF diver training to local dive club

On the evening of June 1st, Sanctuary Integrated Monitoring Network (SIMoN) staff gave a presentation to the Dive Club of Silicon Valley in Santa Clara. Dr. Steve Lonhart was invited to speak to club members at the training facilities in Santa Clara, where members were preparing for the July 9th Great Annual Fish Count (GAFC). In recent years the GAFC has expanded to include sampling targeted species of invertebrates and algae. These divers almost exclusively dive in the Monterey Bay National Marine Sanctuary when making local dive trips. Educating these divers (n=40) to conduct ecological surveys using the protocols developed by the Reef Environmental Education Foundation fosters a sense of stewardship and supports the growing number of citizen scientists.

SIMoN staff divers assist with REEF cruises

On May 30 and 31st, SIMoN staff divers (Chad King and Steve Lonhart) participated in REEF (Reef Environmental Education Foundation) surveys in the Monterey Bay area. Using the charter vessel Monterey Express, REEF divers revisited a pair of study sites each day, diving primarily in Carmel Bay where visibility was 20-40 ft. REEF divers count targeted algae and invertebrates and all

fishes encountered while using a roving diver method. Diving on May 29th was cancelled due to swell and high winds, but operations resumed on Memorial Day and all 18 divers were in the water collecting data. Select wide angle photos from these dives can be found on the MBNMS Facebook page at <http://www.facebook.com/media/set/?set=a.10150209692004916.325788.99323009915>.

SIMoN staff initiates long-term monitoring of Parsons Slough sill in Elkhorn Slough

On June 6th during the low tide, SIMoN staff assisted Dr. Kerstin Wasson to establish fixed photo plots on the newly installed sill at Parsons Slough. The sill is designed to slow tidal exchange and reduce scour and sediment loss without impairing water quality. Monitoring of birds and mammals is already underway, but no one is looking at how the structure itself serves as new habitat for sessile invertebrates and algae. Using fixed photo plots is a quick and easy way to gather data in the field and track changes over time. Only a few barnacles were noted, but in the coming years the metal sill (essentially a wall) will likely be colonized by a variety of invertebrates and algae.

Continental Shelf Characterization of Monterey Bay and Southern MBNMS

From June 3-5, scientists, crew and students from MBNMS and California State University Monterey Bay (CSUMB) characterized portions of the biology and geology of the seafloor in southern Monterey Bay. From June 6-10, the crew shifted their efforts to the southern portion of the MBNMS, specifically the narrow shelf and slope between Piedras Blancas and Big Creek; much of the area has yet to be examined using video instrumentation. The main characterization tool is a camera sled that is towed behind the R/V *Fulmar*. The camera sled is equipped with two video cameras and a pair of lasers for in-situ measurements. As the camera sled glides just above the seafloor, live video is transmitted to the science station on the R/V *Fulmar*, where scientists immediately characterize the habitat and benthic macrofauna. These characterizations are annotated by using a specialized keyboard in which each button is assigned a unique identifier (taxa, habitat type, etc.). Each button press sends a string of text to be stored in the computer, along with the time, date, and GPS coordinates, among other variables. With this information, it is possible to immediately construct a map of what taxa were seen and where. This project addresses MBNMS' mission and benefits the research, education, outreach, and resource protection programs in several ways, including 1) the characterization of key habitats and taxa along the shelf; 2) shelf characterization will advance the Sanctuary's understanding of the resources within its boundaries, which will in turn support future management decisions; and 3) these efforts will yield video clips, frame grabs, and analytical results that will be useful for Sanctuary outreach efforts. For more information about this project, please visit http://www.sanctuarysimon.org/monterey/sections/shelf/project_info.php?projectID=100320&sec=cs.



Sponge, gorgonian and sea star on rock outcrop off Piedras Blancas.

Photo Credit: NOAA/CSUMB

Institute for Applied Marine Ecology collaborates with MBNMS

The Institute for Applied Marine Ecology (IfAME) at Cal. State Monterey Bay was founded to address the significant disconnect between academic science and the needs of federal and state resource managers and policy makers. Andrew DeVogelaere serves on the Advisory Committee for IfAME and the Institute's annual report for 2010 - 2011 has been published. IfAME's collaborations with National Marine Sanctuaries include: Deepwater site characterization in the Monterey Bay National Marine Sanctuary; Central California trawling impact and recovery project; North Central Coast Marine Protected Area Baseline Characterization and Monitoring; and On-going missions to the Aquarium Undersea Laboratory. The budget for next year's research projects will be \$ 383,052.

California Sea Grant partners with NOAA

California Sea Grant just completed their periodic review by the National Sea Grant Office. Andrew DeVogelaere served on the review panel to assess partnerships, and gave a presentation on the role of California Sea Grant in sanctuaries. This ongoing collaboration has focused on Sea Grant Fellowships, advisory roles in Sanctuary science panels, joint publications on fisheries, and development of habitat mapping and MPA monitoring techniques. The focus of future years may be to inform coastal and marine spatial planning.

SIMoN staff train university research divers to monitor state MPAs

From June 20-24, Sanctuary Integrated Monitoring Network (SIMoN) staff trained 12 new science divers working with the Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO) at the University of California at Santa Cruz (UCSC). Research divers were

from California State University, Monterey Bay, Cal Poly, and Humboldt State University. The diversity of university divers is due to expansion of MPA monitoring in the North Central Coast Study Region, which has been funded by the California Ocean Protection Council, and on-going research in central California. As part of the training program, students learned to identify hundreds of invertebrates and algae. Divers spent an entire day in the classroom and then four days diving in Point Lobos State Marine Reserve and in Monterey Bay. This training is part of a close and long-term collaboration between PISCO UCSC and the MBNMS, and includes research cruises aboard the R/V FULMAR starting next week.

Historic vessels lost at sea can be found on MBNMS Maritime Heritage web site

The MBNMS Submerged Cultural Resources Study of 2001 (Smith and Hunter 2003) includes a database of 463 reported vessel losses that lie within the jurisdiction, or adjacent to the boundaries, of the Monterey Bay National Marine Sanctuary. The list of reported losses is now available on the MBNMS Maritime Heritage web site (<http://montereybay.noaa.gov/maritime/losses.html>). Information on the vessels and nature of casualties are available for 31 of the records. The impetus behind acquiring information about recorded and postulated submerged cultural resources of the sanctuary is to provide management direction for future protection and enhancement of these resources.

MBNMS Research Activity Panel Meets at Center for Ocean Health of UCSC

On July 8th, the MBNMS Research Activity Panel (RAP) met at the Center for Ocean Health at University of California, Santa Cruz, CA. Agenda items included: California Sea Grant Program update, Integrated Baseline and Monitoring Studies of California's Network of MPAs, Research Areas Workshop of Ecosystem-based Management Initiative, ocean acidification research in MBNMS, Sanctuary Currents Symposium 2012, and MBNMS research update. For information, see <http://montereybay.noaa.gov/sac/rap/objectives.html>.

White and Basking Sharks seen off Big Sur Coast After Marine Mammal Aerial Survey over Davidson Seamount Aborted

On July 6, four observers and a west coast regional representative flew in a NOAA twin otter to conduct MBNMS' annual aerial survey for marine mammals over and near the Davidson Seamount, 70 miles southwest of Monterey. Unfortunately the typical summer pattern of dense offshore fog prevented the quantitative survey from happening. However, the crew took the opportunity to fly north up the coast from Cambria to Santa Cruz at low altitude and 2 miles offshore. The purpose of this qualitative survey was opportunistic in nature and helped test the SAMSAP II observation software, along with another recording software application, which has traditionally been used by the marine mammal survey. Of special interest were two white sharks and three basking sharks seen off the Big Sur coast. Identifications were confirmed by all expert observers after circling the targets for verification. All observations were recorded and will be extracted and mapped for software program comparison and analysis. For more information about the marine mammal survey program, please visit the project page on SIMoN at

http://www.sanctuarysimon.org/monterey/sections/marineMammals/project_info.php?projectID=100381&sec=mm.

Japanese field guide publishes material from SIMoN

On July 10, Sanctuary Integrated Monitoring Network (SIMoN) staff was notified that the book "A Color Guide to the Rocky Shores of Japan" had been published, and shortly thereafter a copy was received. Dr. So Ishida from the Osaka Museum of Natural History was one of the editors and had asked to use an image of a flyer created by SIMoN staff. The flyer (p. 229) is for the *Undaria* management program in Monterey Harbor. *Undaria pinnatifida* is an Asian kelp native to Japan but is invasive in California and other parts of the world. Staff is listed on the collaborators page (p. 4) but the only English you can see is 'Monterey Bay National Marine Sanctuary, NOAA'--the entire book is in Japanese. The color plates in the book are excellent and this is apparently a field guide for scientists, with a special focus on species invading Japan. Not surprisingly, several of these invaders are native to the US.

SIMoN staff participated in training to monitor fishes inside and outside of state MPAs

From July 11-15, Sanctuary Integrated Monitoring Network (SIMoN) staff trained with 10 new science divers working for the Partnership for Interdisciplinary Studies of Coastal Oceans (PISCO) at the University of California at Santa Cruz (UCSC). Research divers were from California State University, Monterey Bay, Cal Poly, and Humboldt State University. The diversity of university divers is due to expansion of MPA monitoring in the North Central Coast Study Region, which has been funded by the California Ocean Protection Council, and on-going research in central California. As part of the training program, students learned to identify over 40 commonly occurring fishes, and to identify young of the year (YOY). Divers spent an entire day in the classroom and then four days diving in Monterey Bay. This training is part of a close and long-term collaboration between PISCO UCSC and the MBNMS, and includes research cruises aboard the R/V FULMAR starting July 29, 2011.

MBNMS Research Divers Capture Curious Harbor Seals on Video

On July 19, MBNMS research divers encountered curious harbor seals (*Phocis virulent*) while conducting a photo survey for young-of-the-year rockfish at Lover's Point near Pacific Grove, CA. Pictures and high definition video captured the behavior underwater, and a short clip of one interaction can be found on Simon's YouTube channel at http://www.youtube.com/user/simon299?Feature=mhee#p/u/0/tlaWhDdq_c.

RESOURCE PROTECTION

Staff Participation in NOAA OR&R Science of Oil Spills Training

On April 7, Scott Kathey completed the NOAA Science of Oil Spill Training course conducted by the NOAA Office of Restoration and Response in Seattle. Participation in this training helps meet ONMS goals of maintaining a cadre of qualified responders for emergency incidents within the sanctuary system.

Fireworks Coordination with NMFS

MBNMS staff are continuing to coordinate with Office of Protected Resource staff on the process to secure an Incidental Harassment Authorization from NMFS under the Marine Mammal Protection Act for fireworks that are detonated on beaches adjacent to the MBNMS. Thus far, this process is moving along as expected.

Kickoff Meeting for a Community Supported Fishery in Monterey

On April 26, Sanctuary staff helped to facilitate a meeting of fishermen interested in the concept of establishing a Community Supported Fishery (CSF) in the Monterey Bay area. Participants included five fishermen, the harbor master of the City of Monterey, and Monterey Institute of International Studies students and alumni who have studied the potential for a CSF in Monterey. The meeting was hosted by Hopkins Marine Station Director Steve Plumbic, and took place at Hopkins' Boat works Hall. Cafés distribute seafood in the same manner that Community Supported Agriculture (CSA) programs distribute produce: consumers purchase a share of produce (or seafood) upfront at the beginning of a season, and then receive distributions of the fresh local product that is available each week. Cafés have precedence on the U.S. East Coast; where they have proven to be successful models for increasing consumer access to local seafood and offering higher, more stable prices to fishermen in coastal communities. This first gathering of potential CSF suppliers identified opportunities and challenges associated with using this model in Monterey, and initiated a productive dialogue. MBNMS is supportive of this effort as a means to encourage sustainable uses of Sanctuary resources, consistent with the Sanctuary's Ecosystem Based Management Initiative.



On Snapshot Day volunteers collect water samples from all types of waterways that lead into the MBNMS such as the Tembladero Slough. Tembladero Slough has been listed as an Area of Concern by the MBNMS for exceeding the water quality objective in three measured analytes.

Photo Credit: S. Ryan and Team Tembladero

12th Annual MBNMS Snapshot Day a huge success!

On May 7th, 178 volunteers gathered at four hubs in Monterey Bay National Marine Sanctuary (MBNMS) watersheds to participate in the 12th annual Snapshot Day. Snapshot Day is a one-day water quality event in which volunteers monitor creeks and rivers that flow into MBNMS. Field measurements (temperature, conductivity, pH, transparency and dissolved oxygen) are taken and lab samples are collected for analysis of bacteria (e.coli and total coliform) and nutrients (nitrate and phosphate). In all, 178 volunteers sampled 185 sites from coastal San Mateo County to San Luis Obispo County.

EBM Initiative Staff met with NCCOS

EBM Initiative Staff met with NCCOS to explore collaboration opportunities to support spatial analysis for the EBM Initiative. On Friday, May 6th, EBM Initiative staff met with NCCOS (National Center for Coastal Ocean Science) to investigate opportunities for collaboration to support the EBM Initiative. NCCOS can provide cutting-edge research, scientific information and tools that help balance ecological, social, and economic goals, which are integral to the EBM Initiative. In particular, the Biogeography Branch of NCCOS can help MBNMS develop information and analytical capabilities through spatial analysis and assessment on the distribution and ecology of living marine resources and their

associated habitats for improved ecosystem management. MBNMS staff will be identifying specific needs for collaboration with NCCOS in the future.

Caltrans Landslide Planning & Response

MBNMS staff have been in conversation with Caltrans regarding the large landslide at Alder Creek (postmile 7.75) along the Big Sur coast. The April 14th landslide has resulted in a closure of the road in both directions. On April 22, MBNMS staff hosted a multi-agency meeting with Caltrans and the California Coastal Commission to discuss a path forward that allows opening of the road and

continued access to the Big Sur community while minimizing any impact to marine resources. Currently, Caltrans has indicated that an area 350-ft to the north of the slide is at risk for roadway failure. MBNMS have evaluated the request to move/spread 5,000 cys of the material originally slated for placement on the cone of the landslide to the north. This material would be placed at the base of the bluff and would be expected to protect the roadway from collapse for approximately 1-2 years until a permanent solution can be devised. Research staff will be conducting another intertidal survey at this location.

MMPA Take Permit From NMFS for Fireworks within MBNMS

MBNMS staff are continuing work in collaboration with the National Marine Fisheries Service and are in the midst of finalizing an application for an Incidental Take Authorization pursuant to the Marine Mammal Protection Act.

Mayor Meeting

MBNMS staff met with Carmel Mayor McCloud as part of on-going relationship building with local government. Topics of conversation include the Snapshot Day, water quality, plastic bag reduction efforts, Caltrans plans, upcoming workshops and desalination.

MBNMS staff contributes to International Marine Conservation Congress 2 (IMCC 2)

MBNMS staff attended and participated in the International Marine Conservation Congress for 3 days in Victoria, British Columbia. The IMCC is aimed at advancing marine conservation by facilitating discussion among scientists, managers and policy makers and developing science-based products that inform policy change and implementation. MBNMS staff engaged with key agency partners and organizations to develop collaborative relationships with regulatory agencies and integrate with local, state and federal programs that may influence management of MBNMS. In particular, information from special sessions on Ecosystem-based management, the Integrated Ecosystem Assessment, and Marine Spatial Planning and Stakeholder engagement will help inform the Ecosystem-based Management Initiative.

Diverse interests of the Farm, Food Safety & Conservation Network Convene

MBNMS staff facilitated a day-long work session of the Farm, Food Safety & Conservation Network (FFSCN) Steering Committee at Elkhorn Slough on May 17, 2011. The FFSCN is a CA Central Coast region, working group supporting agricultural industry's efforts to reduce food safety risks through methods, which minimize impacts to the environment. Committee members shared updates on current issues in co-management of food safety and the environment, including local and federal food safety rulemaking, regulatory compliance, flooding, education and outreach. Outcomes from the day included the development of coordinated comments to local and federal rule makers to include environmental considerations in food safety policies, and development of a proposal for co-management education programs targeting third party auditors and corporate buyers who set food safety practice standards which can conflict with on-farm environmental conservation efforts. The FFSCN 19 member steering committee includes representatives of the MBNMS, NMFS, US EPA, USDA, CA Department of Fish and Game, Central Coast Regional Water Quality Control Board, The Nature Conservancy, UC Cooperative Extension, and several representatives of large and small scale agricultural operations and interest groups.

Building Partnerships with Tembladero Slough Watershed Landowners

MBNMS staff and the director of the Resource Conservation District of Monterey County met with a major agricultural landowner in the Tembladero Slough watershed on May 18 to discuss opportunities for water quality improvement projects. This landowner is interested in protecting water quality of the MBNMS by improving irrigation and nutrient management, piloting new tailwater treatment technologies, and converting marginal lands into treatment wetlands along one of the most impaired waterways in the region. A champion for marine resource conservation through land management, this landowner keeps the Sanctuary's Ag Plan on-hand in his car for quick reference and has partnered with NMFS on hatchery projects in the past.

Water Quality Staff Participate in Northern California Clean Beaches Forum

On Tuesday, May 17th, WQ staff traveled to Alameda to participate in a quarterly meeting regarding microbial contamination at ocean beaches. Three very informative research projects were presented by UC Davis, Lawrence Livermore Labs and Stanford using different techniques to determine risk to human/animals regarding fecal pathogens and microbial source tracking. There is a lot of research being generated on this topic to identify better methods for monitoring human sources of microbial contamination in order to provide resource managers the tools to minimize the threats. A Stanford study will be focusing source tracking efforts in several watersheds flowing into the MBNMS this summer.

MBNMS Participates in Stormwater Graduate Course Reunion

On Thursday May 19th, Water Quality staff participated in a Community Networking Mixer; a reunion for Center for Ocean Solutions (COS), Stanford, and Hopkins Marine Station's graduate course on local storm water issues and solutions held last December. The class focused on providing the City of Pacific Grove ideas and solutions for storm water issues. Teams provided in depth ideas and plans

including bioswales and permeable pavement in downtown parking areas. The Community Networking Mixer was attended by stormwater representatives of City of Pacific Grove, City of Seaside, Monterey Coastkeepers, Moss Landing Marine Labs, representatives from COS, Hopkins Marine Station and Stanford. Stanford representatives presented a project they're working on related to insitu microbial monitoring and the City of PG discussed a grant funded project that builds on recommendations from the students. This was a great opportunity to continue conversations with local organizations to develop new ideas to address storm water issues and encourage collaboration.

MBNMS staff hosts the Unique and/or Rare workshop in support of the Ecosystem-based Management Initiative

Over 35 expert scientists, stakeholders, EBM Sanctuary Advisory Committee members and the public on May 24th, 2011 at the National Marine Fisheries Service attended the Unique and/or Rare workshop. The goal of the workshop was to gather information on biological, oceanographic, and geological features and submerged cultural resources that are unique and/or rare in Monterey Bay National Marine Sanctuary and to identify supporting data sources and information gaps. The information gathered will be used to help the MBNMS understand the status of marine resources within sanctuary boundaries and will provide data needed to achieve our objective of protecting unique and/or rare features.

Urban Watch Training

On the evening of May 23rd, 16 members of the public attended training for Urban Watch. Urban Watch is a dry weather storm drain outfall monitoring program in Capitola, Monterey and Pacific Grove. Volunteers for this program will monitor assigned storm drain outfalls four times per month per city, and collect water samples to be field tested for detergents, ammonia, orthophosphate and chlorine. The Urban Watch program will continue weekly until the first rains of the winter season.

America's Great Outdoors (AGO) Initiative Brings Together Monterey Bay Area Partners for Water Quality and Resource Protection

The Monterey Bay region has recently been identified as a pilot project area for the White House's America's Great Outdoors Initiative. The purpose of the Monterey Bay America's Great Outdoors Initiative is to work together to identify partnership opportunities and determine actions for natural resource protection and enhancement that achieve water quality protection and publicize voluntary stewardship and collaborative regulatory planning in the watersheds that drain to the Monterey Bay National Marine Sanctuary. On June 17, 2011, Congressman Sam Farr, USDA Deputy Undersecretary Ann Mills, NRCS State Conservationist Ed Burton, MBNMS Superintendent Paul Michel, and USFS Deputy Regional Forester Ron Ketter came together with roughly 100 representatives of diverse resource conservation agencies and interest groups to kick-off the initiative. The community meeting was an opportunity for diverse interests to provide input on the importance of America's working landscape and outdoor recreational resources around the Monterey Bay, and to identify critical needs and partnership opportunities to maximize the benefits to natural resources and communities. The USDA and partner agencies including the MBNMS will develop an action plan for the Monterey Bay America's Great Outdoors Initiative based on input provided at the meeting.

"Styrofoam free" decals distributed to local restaurants

On June 13 and 14, Sanctuary staff trained volunteers to offer window decals to local restaurants that say: "This establishment is styrofoam free for our oceans." The decal project was conceived by Surfrider Foundation as a means to enforce local bans on expanded polystyrene (EPS) in foodservice businesses. EPS is a significant contributor to marine debris in the MBNMS and beyond. Instead of launching a negative campaign against offending restaurants, this project aims to provide recognition for compliant businesses while increasing the awareness of patrons. Thus far, 18 restaurants have agreed to display the decal. Volunteer recruitment and training will continue in the coming months, with the initial goal of offering the decal to all restaurants in local cities with EPS bans in effect (Monterey, Pacific Grove, Carmel, Seaside, Del Rey Oaks, and unincorporated Monterey County). The project is a joint effort between the Monterey Chapter of Surfrider Foundation, city governments, and local sustainability groups, with MBNMS support.

Upcoming Monterey Bay Climate Adaptation Workshop – December 6, 2011

MBNMS and The Center for Ocean Solutions (COS) continue to plan and develop a December 2011 Workshop on Adaptation to Climate Change in the Monterey Bay Region in coordination with staff and members from CA Coastal Commission, AMBAG, Cities of Santa Cruz and Carmel, ICLEI (Local Governments for Sustainability), CENCOOS, NOAA Coastal Training Center, PWA, and Stanford University. Staff conducted 10 meetings with various coastal city mayors and county officials around the Bay, which has helped inform the workshop goals and objectives. A professional facilitator, Evan Thomas Paul, with Kearns and West has been contracted to assist, and the planning group concluded their 6th meeting on June 14th in Santa Cruz. Invited participants will include city staff (planners), resource managers and local elected officials, which the latter will likely be invited to participate in a mayoral panel discussion. The workshop will culminate with a reception at the Monterey Bay Aquarium. An initial draft agenda includes a morning plenary session with renowned climate change experts on impacts to the Monterey Bay coastline, realized and predicted, information on the NOAA adaptation planning model, and case studies on how cities have begun the process of climate change adaptation planning.

The afternoon will be a series of breakout sessions that include risks associated with sea level rise and erosion, wetland/slough/marine

coastal assets, and infrastructure issues such as coastal roads, sewage treatment. The workshop will take place at the Monterey Conference Center (in kind donation) and will be the first in a series of workshops, if additional funding can be secured.

Multi-agency meeting to discuss Santa Cruz dredge disposal

Representatives from the US Army Corps of Engineers, CA Regional Water Quality Control Board, CA Coastal Commission, MBNMS, and the Santa Cruz Port District attended a presentation given by Curt Storlazzi of the US Geological Survey. The USGS was funded by the USACE and the Port District to conduct analysis on a “demonstration project” as part of Santa Cruz Harbor’s dredge disposal activities for the 2009 dredge season. Curt presented both his professional and personal views of the dredge disposal activities.

Fireworks!

MBNMS staff have been coordinating with National Marine Fisheries Service Office of Protected Resources in Silver Spring, MD for the past several months in order to secure approval to allow fireworks displays over the MBNMS. An Incidental Harassment Authorization was received this week, and as a result the MBNMS issued an Authorization to the Cambria American Legion so they could celebrate the nation’s independence at Shamel Park Beach in Cambria. According to NMFS, the MBNMS remains the only agency in the US securing approval for fireworks under the Marine Mammal Protection Act. Efforts are already underway to comply with NMFS 8-18 month application timeline to secure a follow-up 5 year approval.

MBNMS and Resource Conservation Districts partner to improve regional tracking of water quality improvement efforts

On June 27, 2011, the MBNMS hosted a meeting with representatives of CA Central Coast Resource Conservation Districts (RCDs) to build consensus on an approach to capture project implementation data consistently across the region. While much progress has been made to synthesize water quality monitoring data on the Central Coast through the MBNMS SAM project, our ability to assess the extent and impact of efforts to improve water quality is still limited due to inconsistent and insufficient collection of project implementation data in the watersheds. To address this need, the MBNMS AWQA program has been working with area Resource Conservation Districts to develop an improved, regionally consistent project data tracking approach over the past year. First, MBNMS AWQA staff met with individual RCDs to assess their project data tracking needs, which were compiled and integrated into a draft data tracking framework. Participants at the June 27th meeting then reviewed and built consensus around the data fields and definitions. Once developed, this tool could aid the MBNMS and our water quality partners in strategic planning, reporting, disseminating results, and evaluating our impacts.

MBNMS WQPP Shares Experiences with HIIWNMS Water Quality Working Group

On June 30th, MBNMS Superintendent and staff gave an Internet presentation (gotomeeting) to the HIIWNMS Water Quality working group. As part of the HIIWNMS Management Plan process, this working group is exploring other sanctuary programs related to water quality. The presentation highlighted, the unique role of the MBNMS Water Quality Protection Program’s collaborative work in the watersheds, Memorandum of Agreement with other regulatory agencies, issue based action plans, volunteer monitoring programs, and alternative funding sources. All participants were engaged and asked many great questions.

Grounded Sailboat Destroyed

On July 9, the MBNMS was notified that a 30-foot wooden hull sailboat had parted its mooring at Capitola and grounded on a riprap armored shoreline about 100 yards east of the Capitola Wharf. MBNMS emergency response staff surveyed the scene later in the day and found that the vessel had been completely destroyed. The City of Capitola Public Works Department collected a large amount of debris from heavily visited nearby public beaches over the following several days. No one was injured during the incident. The vessel was not insured. Very little debris remains on the shoreline.

19th Century Anchor Recovered

On July 14, the MBNMS was notified that a commercial fishing vessel had snagged and raised a 3000 - 4000 lb anchor from its resting place in northern Monterey Bay. MBNMS staff collected and forwarded photos to ONMS marine archaeologist Robert Schwemmer, who identified the anchor, a common admiralty style iron anchor with a collapsible iron stock, commonly used along the Pacific West Coast from the late-nineteenth century into the early-twentieth century. The MBNMS coordinated with the ONMS Maritime Heritage Program, California State Lands Commission, and federal, state, and local officials to determine the best ocean retirement site for this historical artifact. Handling of a historical artifact of this nature is a rare occurrence for the MBNMS program.

ENFORCEMENT

Joint Enforcement Patrol Flight with US Coast Guard

On March 28, MBNMS staff lead and participated in a 4.5 hour enforcement flight through the GFNMS, CBNMS, and MBNMS aboard a Coast Guard C-130 aircraft. The flight was conducted in support of sanctuary and state regulatory enforcement, and included participation by enforcement personnel from the CA Department of Fish & Game and the US Environmental Protection Agency. A

member of the CA Fish & Game Commission also participated to evaluate the effectiveness of the C-130 for monitoring compliance with state marine protected area regulations. The flight is part of an ongoing effort by MBNMS to collaborate with enforcement partners with shared interests in ecosystem protection.

Quarterly LE TAC Meeting

On May 12, MBNMS staff lead a meeting of the Law Enforcement Technical Advisory Committee (LE TAC) at Hearst Castle to discuss upcoming seasonal issues of common interest to the marine law enforcement community within the sanctuary. Fifteen members participated, representing 4 federal and 2 state agencies. Determining an optimal enforcement response strategy for seabird disturbance was a focal point of discussion. The group also discussed enforcement matters for the coastal region between Pt Sur and Cambria. The LE TAC fosters collaborative enforcement surveillance and response within the MBNMS for enhanced marine resource protection.

MBNMS Completes Aerial Enforcement Patrols

The MBNMS completed aerial enforcement patrols through the sanctuary aboard Coast Guard and NOAA aircraft in June. The patrols yield a variety of information about human activities in the sanctuary and potential violations of environmental laws at the federal, state, and local levels. The patrols involve both cooperation and collaboration with government partners to meet integrated natural resource protection goals and foster efficient use of limited resources.

EDUCATION AND OUTREACH PROGRAMS

\$500,000 Grant Awarded for Sanctuary Exploration Center Exhibits

The Monterey Bay National Marine Sanctuary Exploration Center project in Santa Cruz, CA received a great boost on April 13th. Staff was notified of the award of a \$500,000 grant to the National Marine Sanctuary Foundation through the State of California's Parks & Recreation Department. Foundation and sanctuary staff collaborated on the extensive grant application and two rounds of site visits by California State Parks staff. The Foundation's local Leadership Committee worked diligently throughout the process. MBNMS and the National Marine Sanctuary Foundation have a \$3M goal to cover the cost of Sanctuary Exploration Center exhibits and \$2.6M has been raised to date.

Monterey Bay National Marine Sanctuary and Save Our Shores Receive Grant from National Geographic

Save Our Shores (SOS) and the Monterey Bay National Marine Sanctuary (MBNMS) have received a grant from National Geographic to help raise public awareness of the spectacular marine resources along the central California coast by hosting a Speaker Series aimed at the recreational ocean-user community. Specifically, a series of listening and educational events will be conducted at existing venues within the yachting and outrigger clubs along the Central California coast.

The purpose of the speaker series is to engage this active, conservation-minded constituency in activities that support ocean conservation along the Monterey Bay. Information gathered from listening to the ideas and concerns of the ocean recreation community will help us understand how existing management of the Monterey Bay National Marine Sanctuary is facilitating ocean recreation and support the EBM Initiative. The objectives of the speaker series are to: 1) understand the main issues of concern and interest to the recreational ocean user community, 2) communicate the strategies and opportunities currently underway in the Monterey Bay for enhancing ocean protection and management, 3) explore how we can work together to improve ocean conservation, and 4) build stronger collaborations with the ocean recreation community to support ocean conservation.

The first public outreach event was attended by 60 yachters in Santa Cruz. The second public outreach event was attended by more than 35 yachters at the Monterey Peninsula Yacht Club and was kicked off by Commodore Joe Headley. The final public outreach event was held in Moss Landing and was attended by 22 yachters. Information gathered from listening to the ideas and concerns of the ocean recreation community will help us understand how existing management of the Monterey Bay National Marine Sanctuary is facilitating ocean recreation and will be used to help understand ways to achieve our EBM Initiative: to promote ecologically and economically sustainable uses in MBNMS.

MBNMS Staff Assist in Producing Signs and Brochures for CA Marine Protected Areas

MBNMS staff worked closely with the Monterey Bay Sanctuary Foundation to help produce a series of interpretive signs and brochures that will better inform the public about the network of state marine protected areas (MPAs) within the sanctuary. Staff provided extensive help in developing and reviewing interpretive content, graphics and maps for ten different signs and eight different brochures that will be installed/distributed at various locations along the MBNMS shoreline. The brochures are being distributed now to groups such as state parks, coastal visitor centers and dive shops, while the signs are being installed at key high-visitor coastal sites from Ano Nuevo south to Cambria.



Wayne Perryman, National Marine Fisheries Service, giving a talk on whales to community members from San Luis Obispo County.

Photo Credit: Brittany Cooper/NOAA

MBNMS Spring Lecture Series 2011 a success!

The first MBNMS spring lecture series held in Cambria, CA took place on Friday evenings at Cambria's Rabobank public meeting room to the delight of local mid-coast residents. Many local San Luis Obispo County residents volunteer for marine education and monitoring programs, and so the focus of the lecture series was to inform them about marine research being conducted in nearby offshore waters. Speakers represented NOAA agencies, Universities and the Monterey Bay Aquarium. Topics ranged from updates on SIMoN including the Med Taipei lost shipping container at sea project by Dr. Andrew DeVogelaere (MBNMS); Tsunamis of the Pacific Rim and their Impact on Central CA by John McCabe (Cuesta College); Current Research and Trends in the CA Grey Whale by Wayne Perryman (NMFS); Monterey Bay Aquarium's Juvenile White Shark Project from John O'Sullivan (Monterey Bay Aquarium); Marine Studies at UC Santa Barbara's Ken Norris Rancho Marino Reserve by Don Canestro (UCSB); and Kelp Forests of the Central Coast by Dr. Steve Lonhart (MBNMS). Attendees were from Cambria, Morro Bay, Atascadero, San Luis Obispo, and Paso Robles, and rangers from CA State Parks were also in the audience. Due to such a positive response, lectures are already being planned for next April and May.

MERITO Celebrates 10th Anniversary and Partner Appreciation Day

On April 30th MBNMS-MERITO staff hosted a partner appreciation day at Elkhorn Slough National Estuarine Research Reserve (ESNERR), in celebration of the program's 10th anniversary. Middle school teachers, youth leaders, adult ESL teachers and various key partners attended the event and highlighted MERITO's important accomplishments and contributions to local communities in the Monterey Bay region. The event included a hike, a luncheon, an awards ceremony, plankton lab, and culminated with a very informative brainstorming session with teachers on how to maintain base support for MERITO's core programming.

New batch of MBNMS volunteers for Team OCEAN and Bay Net

Graduates of the 2011 class include 23 new Team OCEAN Kayaker Outreach volunteers and 11 new Bay Net Shoreline Naturalists.

The 6-week training covers aspects of oceanography, marine mammals, sea birds, and sanctuary rules and regulations. Trainees will be out on the trail and on the water starting May 28, 2011. Every year, volunteers talk with and educate over 7,000 residents and visitors to the Monterey Bay area. Since Team OCEAN's inception in 2000 over 58,000 people have been communicated with [on the water](#).

Since Bay Net's inception in 1995 over 73,000 people have stopped to talk with volunteers.

Fisheries Education Team Participates in Local Fisheries Panel Discussion

Fisheries Education Team staff was invited to present at a monthly Santa Cruz Environmental Film Series, which focused on Fisheries in April. The event screened "The End of the Line" (docuramafilms and NewVideo). Following the screening, Monterey staff presented on what role MBNMS played in local fisheries, described the MBNMS' Fisheries Education Programs, and answered questions about the status and condition of local and California fisheries. This event increased awareness of MBNMS and the role of MBNMS in fisheries management. Additionally, making connections between local communities and our commercial fishing industry and heritage is a primary goal of the MBNMS Fisheries Education Program.

Access Monterey Peninsula (AMP)

MBNMS staff have submitted several existing media products to directors at the local public access television station. AMP is very interested in partnering with the National Marine Sanctuary and hopes to collaborate with our office in better promoting this national treasure to the 125,000 viewers it's station broadcasts to daily. On April 21st MBNMS staff attended an evening event at the studios of the local cable access station AMP. Staff had an opportunity to receive a tour of the facilities and to discuss possible options for future broadcasts specific to the National Marine Sanctuary. This meeting was an opportunity for continued relationship building and to better understand the resources AMP has on-hand.

Hotel Outreach

MBNMS staff met with the General Manager of Chaminade Resort to discuss possible opportunities for collaboration between the MBNMS, both in general and related Sanctuary Exploration Center efforts.

Outreach to Capitola Aptos Rotary

On April 14th MBNMS staff gave a presentation to the Capitola Aptos Rotary. Staff covered topics such as: what is a NMS, what staff at MBNMS work on, and most importantly what's happening with the Sanctuary Exploration Center. The presentation was well received and club members have followed up with information on grants and requests for future presentations.

Relationship Building with Elected Officials

MBNMS staff gave Santa Cruz County Supervisor Ellen Pirie an annual update on Sanctuary issues. Topics of conversation included: the Symposium, Snapshot Day, Agriculture and the Regional Board, the Association of Monterey Bay Area Governments (AMBAG), and the Sanctuary Exploration Center.

Outreach to Business Community

MBNMS staff met with the Santa Cruz Downtown Business Association on May 3rd and presented a twenty-minute overview of the MBNMS & the Sanctuary Exploration Center. Business leaders in attendance were engaged in the overview and very interested in the progress of the SEC. Several members requested contact information and indicated interest in donation opportunities.

MBNMS' Voices of the Bay Fisheries Education Program, Fisherman in the Classroom, and Other Educational Opportunities Highlighted at Teacher Conservation Series

Monterey staff participated in the "Analyze, Conserve, Teach" Teacher Conservation Series at the Monterey Bay Aquarium. Local organizations involved in Conservation Policy and Advocacy were invited to inform the teachers about the mission of their programs and the educational opportunities they provide. The 25 teachers came from all over central California as well as a range of disciplines and grade levels. During the event, teachers received copies of MBNMS fisheries and watershed education curriculum. The workshop is part of a larger effort to expose teachers to the educational opportunities and curriculum produced by MBNMS.

NOAA Fisheries Supports Fisherman in the Classroom Program in 2011

NOAA Fisheries provided financial assistance to support the successful implementation of twenty-seven Fisherman in the Classroom programs for schools in both MBNMS and Gulf of the Farallones NMS during 2011. Fisherman in the Classroom provides students a hands-on learning experience of "a day in the life" glimpse into who a modern-day fisherman is and what exactly s/he does. This program reaches many students that do not have the opportunity to experience the marine environment first hand and provides a greater appreciation for the men and women working to bring seafood to our local restaurants and markets. During 2010, over 3,000 students, teachers, and parents participated in classroom visits and/or harbor tours through the Fisherman in the Classroom program. Providing a face to our commercial fisheries and teaching students of our local fisheries are goals of the Fisherman in the Classroom program.

Deep Sea Canyon Installed at the Sanctuary Exploration Center

A 14,000-gallon deep sea submarine canyon exhibit was installed today into the steel frame of the new NOAA Monterey Bay National Marine Sanctuary Exploration Center under construction in Santa Cruz. A crane lifted the two-story, two piece and over 10,000 pound tank into the steel structure of the facility (see photo below). The tank is so big that it had to be placed before the walls go up on the building. This interactive exhibit will give a visitor the opportunity to operate a remotely operated vehicle and view replica animals in a simulated deep sea ecosystem. Along with the tank, other exhibits will be installed in the next few months, including two replica ship sections: a 37-foot hull of a fishing purse seiner and the 20-foot transom of the MBNMS research vessel *Fulmar*.

MERITO Bilingual Watershed and Ocean Literacy Education for Adults

On May 17th MBNMS-MERITO staff completed the Spring 2011 session (March-May) of its adult education program "Salinas: Water, Ecology and Green Jobs", serving a total of 90 adult ESL students from the city of Salinas. This is a vocational watershed and ocean literacy program, integrated into existing English as Second Language (ESL) classes at the Salinas Adult School. The program consists of 8 classroom sessions (with a combination of presentations and hands-on activities) and 3 field trips to different parts of the local watershed. This program is a collaborative effort between the Salinas Adult School, the Watershed Institute at California State University Monterey Bay (CSUMB), and MBNMS-MERITO.

Outreach to Elected Officials

MBNMS staff met with Santa Cruz County Supervisor Mark Stone this week to discuss a number of issues including: climate change workshops, water quality, constituent concerns, the Sanctuary Exploration Center, and ideas for connecting recreational swimmers to the MBNMS. Supervisor Stone has successfully swum the English Channel and is interested in supporting the MBNMS through untapped recreation opportunities and mutually beneficial outreach.

SEC Support - Event at MBARI

MBNMS arranged a kick-off celebration announcing a new partnership between Sanctuary Cruises and the Foundation to support MBNMS marine education efforts. Highlighted were the unique ocean partnerships that are present in Moss Landing, and use the

presence of the National Marine Sanctuary as a means to relate how the business, research, and education communities are all working together to foster ocean awareness.

MERITO watershed education in Spanish for farm workers

On May 16th MBNMS-MERITO staff led an interactive presentation in Spanish on watershed literacy and water quality issues for farm workers in San Mateo County. A total of 23 farm workers attended the presentation. This is part of an agreement between MBNMS-MERITO and San Mateo County - Resource Conservation District (San Mateo RCD) to potentially develop an education program on water quality protection and food safety for farm workers and farm owners in San Mateo County.

Outreach to Santa Cruz City Council & Advisory Council Members

MBNMS staff prepared a hour-long briefing for past and current elected officials in Santa Cruz. The focus of the presentation was an overview of MBNMS in general, with special emphasis on regulatory and permitting issues related to dredge disposal and jetskis. In addition, staff provided an update on all the recent exciting developments with the Sanctuary Exploration Center.

Capitola City Council Briefing

MBNMS Superintendent gave a formal presentation to the Capitola City Council on May 26th. This opportunity was a result of previous meetings with Capitola Mayor Norton. The presentation focused on the MBNMS in general, including education, outreach, research, and enforcement efforts, as well as an update on the Sanctuary Exploration Center. City Council meetings are telecast on the local cable television station.

MERITO receives \$5k award from REI

On June 1st MBNMS-MERITO staff formally received a \$5,000 award from Recreational Equipment Inc, (REI) to sponsor school field trips to local watersheds and coastal habitats during the 2011-2012 school year.



Mark DiOrio, National Marine Sanctuary Foundation, and Deirdre Whalen, Monterey Bay National Marine Sanctuary, accept a donation for the Sanctuary Exploration Center from New Leaf Market.

Photo Credit: Unknown

MERITO public screening of student video projects and ocean stories

On June 1st MBNMS-MERITO staff hosted a public screening of 22 student video projects, culminating the 2010-2011 cycle of MERITO's Multicultural Voices of Ocean Literacy (MVOL) project. MERITO staff and interns worked with 115 students (4th and 5th grade) from 4 school sites in Marina, Seaside and Salinas to complete 22 team-based 4-6 min video projects focusing on ocean related issues and Marine Protected Areas in the Monterey Bay National Marine Sanctuary. MERITO's MVOL project allows students to integrate field-based and hands-on experiences with digital storytelling skills to promote a self-directed learning of ocean literacy.

New Leaf Market Day Support's Sanctuary Exploration Center

MBNMS & National Marine Sanctuary Foundation staff collaborated with New Leaf Market Community Day-- thank you to those of you who the supported event. New Leaf shoppers raised \$5,148.00 from Community Day to go towards the Monterey Bay National Marine Sanctuary Exploration Center. This effort was a really nice opportunity to connect with the community. Staff participated in a photo shoot on June 3rd, which resulted in a New Leaf Press Release highlighting the partnership.

Sanctuary and Fishing Community Partner to Share Local History and Knowledge with Teachers

NOAA sanctuary staff and members of the central California commercial fishing community collaborated to share their fisheries knowledge and history with California teachers as part of the Monterey Bay National Marine Sanctuary's (MBNMS) "Voices of the Bay Fisheries Education" program. Fifteen formal and informal educators spent the afternoon of June 22nd interviewing a diverse range of fishing community members to capture the rich stories and heritage of fishing along California. The seven members of the fishing community in attendance included: Jim Anderson (commercial fisherman, Half Moon Bay), Hans Haveman (fish buyer and seller at area Farmers' Markets, Santa Cruz), Jim Moser (commercial fisherman, Santa Cruz), Mike Zucker (commercial fisherman, Santa Cruz), David Crabbe (commercial fishing representative for the Pacific Fishery Management Council, Carmel), Elizabeth Pennisi-Nozicka (commercial fishermen's wife and daughter), and Elaine Pennisi (commercial fisherman's wife and part-owner of fish buyer/processor company). Educators appreciated the depth and breadth of information learned and the chance to talk with multiple stakeholders in the

fishing community. In addition, the members of the fishing community appreciated sharing their stories and perspectives on fisheries as well as the value placed on their knowledge. Fostering one-on-one interactions between educators and the fishing community is a cornerstone for the sanctuaries MBNMS' "Voices of the Bay Fisheries Education" program.

Del Mar Theater Movie Night

The June 16th Del Mar Theater Movie Night event, entitled "A Night in the Deep" has contributed \$1,656 to the Sanctuary Exploration Center Capital Campaign. This is a result of combined ticket sales, an opportunity drawing, beverage sales, and a 20% donation by a neighboring restaurant. Both the NMSF and the MBNMS are pleased with the outcome.

MBNMS Hosts "Voices of the Bay Fisheries Education" Professional Development Workshop

Education team staff Kristin Hunter-Thomson, Lisa Uttal, Carolyn Skinder, Seaberry Nachbar (Office of National Marine Sanctuaries), and Peter Winch (Gulf of the Farallones National Marine Sanctuary) hosted a "Voices of the Bay Fisheries Education" Professional Development Workshop June 19th-22nd in Santa Cruz, CA. The purpose of the Professional Development Workshop was to introduce fifteen new formal and informal educators, of Middle and High School students, from throughout California (Marin to Los Angeles to Fresno) to the "Voices of the Bay Fisheries Education" curriculum. Teachers learned about California fisheries, fisheries science, social science, and management and the history of fishing in Monterey Bay. Each day of the workshop was spent in lectures from local fisheries experts, field trips, educator discussions, and participating in each curriculum module. Collaborations among scientists, fishermen and educators continue to be the foundation for the Voices of the Bay Fisheries Education place-based education program. Additionally, providing hands-on learning experiences with the fishing community is a cornerstone for the "Voices of the Bay Fisheries Education" program.

Annual Coastal Discovery Center fair a great success

Once a year, on the third Saturday in July, about 20 partnering agencies and non-profit groups get together to celebrate their shared goals of resource protection by tabling at the Coastal Discovery Center Fair in San Simeon. Co-hosted by MBNMS and CA State Parks, 2011 marked the sixth year of this event, with about 600 visitors in attendance. Co-sponsored by the Monterey Bay Sanctuary Foundation, attending groups were BLM's CA Coastal National Monument, CHP, Friends of Fiscalini Ranch, Friends of the Elephant Seals, the Marine Mammal Center, the Marine Advanced Technology and Education (MATE), Marine Mammal Center, Morro Bay Coast Audubon, Pacific Wildlife Care, Central Coast Salmon Enhancement, SLO County Stormwater Management Program, Steve Shubert Hi Mountain Condor Project, Too SLO Turtles & Tortoises, US Geodetic Survey Sea Otter Survey, were in attendance. Educational games, arts and crafts and face painting were offered, and Superintendent of MBNMS Paul Michel and family dressed up as Sammy the Steelhead!



Fair attendees build and test their own ROVs at the Marine Advanced Technology and Education (MATE) booth.

The Sanctuary Exploration Center is taking shape!

Please go to the following link to view real-time video of the building construction --- <http://173.8.140.236/>. The concrete 1st and 2nd floor were poured as well as the steel infrastructure completed.

The roof is being placed on the building while the metal studs and yellow fire proofing material are beginning to form the walls. MBNMS staff has seen incredible progress at the Exploration Center construction site and anticipate the facility being completed December 2011 with final exhibit construction finished April 2012 and a planned grand opening sometime early summer 2012. For more information, please contact lisa.uttal@noaa.gov, Exploration Center Project Manager.

Photo Credit: Brittany Cooper/NOAA

NEWS COVERAGE

4/1 “All Things Considered”, - National Public Radio, Christopher Joyce

<http://www.npr.org/2011/04/01/135040267/lost-then-found-shipping-containers-on-seafloor>

[Phone interview with Andrew DeVogelaere; 3:08 min, mp3 download]

4/4 - “Monday Reads: The Lost Shipping Container Edition,” Earth Justice (blog), Shirley Hao

<http://earthjustice.org/blog/2011-april/monday-reads-the-lost-shipping-container-edition>

4/5 - “10,000 Shipping Containers Lost at Sea Each Year...Here’s a Look at One,” Singularity Hub, Aaron Saenz

<http://singularityhub.com/2011/04/05/10000-shipping-containers-lost-at-sea-each-year-heres-a-look-at-one-2/>

4/6 - “10,000 Shipping Containers Lost At Sea Each Year,” Slashdot (blog)

http://science.slashdot.org/story/11/04/06/0158207/10000-Shipping-Containers-Lost-At-Sea-Each-Year?utm_source=rss1.0&utm_medium=feed

4/7 – “The Deep, The Dark And The Weird: Symposium highlights local marine research with worldwide impacts,” Monterey County Weekly, Kera Abraham

<http://www.montereycountyweekly.com/news/2011/apr/07/deep-dark-and-weird/>

4/7 - The Mid-County Post, “Scientists Explore Cargo Container Dropped in Monterey Bay”

<http://www.mcpost.com/article.php?id=3361>

4/20 - “Global Logistics News: Where is Your Stuff from Asia? Maybe at the Bottom of the Ocean, Changing the Habitat” SupplyChainDigest, SCDigest Editorial Staff

<http://www.scdigest.com/ontarget/11-04-20-2.php?cid=4463>

5/11 – Surfers get ticket to ride, Santa Cruz Sentinel by Stephen Baxter

http://www.montereyherald.com/news/ci_18039593?nclick_check=1

5/17 - Biggest piece of Marine Sanctuary's deep-sea submarine canyon exhibit installed; Santa Cruz Sentinel by Joel Hersch

http://www.mercurynews.com/central-coast/ci_18081816?source=rss

Hartnell College nets \$900,000 clean energy grant – The Salinas Californian

<http://www.thecalifornian.com/article/20110607/NEWS12/106070308>

Environmentalists want slower ship speeds to protect whales off California coast – Los Angeles Times

<http://latimesblogs.latimes.com/greenspace/2011/06/whale-ship-speed-limit-slow-california-marine-sanctuaries.html>

Speed limit for ships in Monterey Bay sought – KSBW The Central Coast

<http://www.ksbw.com/news/28158853/detail.html>

MLPA Initiative Publications – Get them while they’re hot! – Bay Area Indymedia

<http://www.indybay.org/newsitems/2011/06/07/18681264.php>

Demonstrators link hands in protest against offshore drilling – Santa Cruz Sentinel 6/26/11

http://www.santacruzsentinel.com/localnews/ci_18355986

Test for desalting plant divisive – San Luis Obispo Times 6/24/11

<http://www.sanluisobispo.com/2011/06/24/1657324/test-for-desalting-plant-divisive.html>

Regulators approve July Fourth fireworks on California coast – San Luis Obispo Tribune 6/29/11

<http://www.sanluisobispo.com/2011/06/29/1663903/regulators-approve-july-fourth.html>

California marine mammals beware: Feds say coastal fireworks can proceed – Sacramento Bee 6/29/11

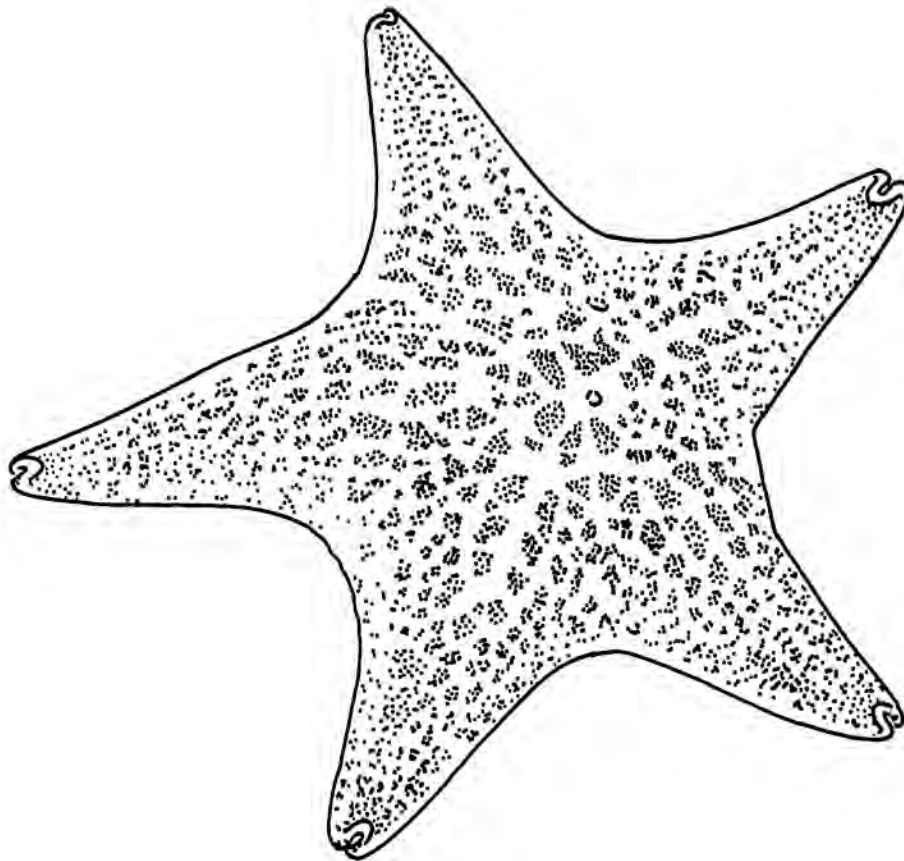
<http://www.sacbee.com/2011/06/29/3734471/marine-mammals-beware-feds-say.html>

7/13/11 - Santa Cruz City Council OKs budget, condo agreement and redevelopment plan – Santa Cruz Sentinel
http://www.santacruzsentinel.com/localnews/ci_18463046

7/14/11 - Farr leads effort to restore ocean funding – Santa Cruz Sentinel
http://www.santacruzsentinel.com/localnews/ci_18474595

7/21/11 - Coastal Discovery Fair: A wonder-full time – The Cambrian
<http://www.sanluisobispo.com/2011/07/21/1689353/coastal-discovery-fair-a-wonder.html>

7/22/11 - Slipping Containers - Monterey County Weekly -
<http://www.montereycountyweekly.com/news/2011/jul/21/slipping-containers/>



WEB SITE (<http://montereybay.noaa.gov/>)

Recent Updates

Visit the web pages listed below to see recently updated sections of the MBNMS web site.

- 2010 MBNMS Annual Report
<http://montereybay.noaa.gov/educate/pdf/042211annualreport.pdf>
- 2010 Lost Fishing Gear Cruise Report
http://montereybay.noaa.gov/resourcepro/resmanissues/pdf/041411lfg_report.pdf

Follow the MBNMS on Facebook and Twitter!

*Please take a few moments to peruse the site. Your feedback is greatly appreciated.
Comments and suggestions can be sent to andrew.white@noaa.gov.*

FUN, OCEAN RELATED WEB SITES

NOAA Online Media Library

<http://sanctuaries.noaa.gov/photos>

Encyclopedia of the Sanctuaries

<http://www.ocean.com/Library/Encyclopedia/>

Oceans Live

<http://www.oceanslive.org/portal/>

SIMON

www.mbnms-simon.org

Office of National Marine Sanctuaries

<http://www.sanctuaries.nos.noaa.gov/>

NOAA Ocean Explorer

<http://oceanexplorer.noaa.gov/>

National Data Buoy Center

<http://www.ndbc.noaa.gov/rmd.shtml>

National Ocean Service

<http://www.nos.noaa.gov/>

National Oceanic & Atmospheric Administration

<http://www.noaa.gov/>

Thank You Ocean

<http://www.thankyouocean.org/>

Learn More About Your Sanctuary

The Sanctuary Office Report is produced bi-monthly by the Monterey Bay National Marine Sanctuary in conjunction with Sanctuary Advisory Council meetings. To learn more about the Sanctuary please visit our web site at: <http://www.montereybay.noaa.gov>.

To learn more about the Sanctuary Advisory Council please visit:
<http://www.montereybay.noaa.gov/intro/advisory.html>

The Office of National Marine Sanctuaries

The Monterey Bay National Marine Sanctuary is one of 14 marine protected areas in the National Marine Sanctuary System encompassing more than 150,000 square miles of marine and Great Lakes waters from Washington State to the Florida Keys, and from Lake Huron to American Samoa. The system includes 13 national marine sanctuaries and the Papahānaumokuākea Marine National Monument. Visit the ONMS web site at: <http://www.sanctuaries.nos.noaa.gov/>

Get involved and stay informed!

To learn how to get involved in the Sanctuary visit:
<http://montereybay.noaa.gov/educate/internship.html>

Sign up for the MBNMS listserv to receive email notices about upcoming Sanctuary events, and public meetings of the Sanctuary Advisory Council and its Working Groups:
<http://montereybay.noaa.gov/discussiongroups/disgroups.html>.

MBNMS Staff

Paul Michel – Superintendent
Karen Grimmer – Deputy Superintendent
John Hunt – Deputy Superintendent
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Erica Burton – Research Assistant
Jennifer Brown – Research Associate
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Chad King – SIMoN Data Analyst
Dawn Hayes – Education & Outreach Coordinator
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Lisa Uttal – Visitor Center Project Manager
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Lisa Emanuelson – Citizen Watershed Monitoring Network Coordinator
Rikki Dunsmore – Resource Protection Specialist
Raymond Chisolm – Program Specialist
Nicole Capps – Advisory Council Coordinator
Andrew White – Network Manager
Sophie De Beukelaer – GIS Analyst
David Minard – R/V Fulmar Captain
Hans Burning – R/V Fulmar Mate
Erik Larson – R/V Fulmar Operator



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